

LISTING OF THE CLAIMS

The following Listing of the Claims replaces all previous listings of the claims within this application.

Please cancel claims 1-3.

Please amend claims 4, 11 and 15 as follows:

Please add claims 21-23.

1. – 3. (canceled)

4. (currently amended) A cell structure for a spatial light modulator comprising:

a first substrate having a first surface;

a plurality of first deflection electrodes formed at least partially on the first surface of the first substrate;

a plurality of deflectable elements supported at only one end thereof and connected to the first surface of the first substrate and registered with the plurality of first deflection electrodes;

a second substrate assembled and spaced opposite the first surface of the first substrate, the second substrate having formed therein a plurality of second deflection electrodes registered singly with the plurality of deflectable elements and the plurality of first deflection electrodes such that a deflectable element is physically constrained between a first deflection electrode and a second deflection electrode.

5. (original) The cell structure of claim 4 wherein the first deflection electrode and the deflectable element are of the same polarity of charge and the deflectable element is deflected away from the first deflection electrode.

6. (original) The cell structure of claim 4 wherein the first deflection electrode and the deflectable element are of opposite polarity of charge and the deflectable element is deflected towards the first deflection electrode.

7. (original) The cell structure of claim 4 wherein the first substrate is a transparent substrate.
8. (original) The cell structure of claim 7 wherein the first deflection electrode is a transparent electrode.
9. (original) The cell structure of claim 4 wherein the second substrate is a transparent substrate.
10. (original) The cell structure of claim 9 wherein the second deflection electrode is a transparent electrode.
11. (currently amended) A method for fabricating a deformable mirror device comprising:
providing:
a first substrate having formed therein a plurality of first deflection electrodes;
a second substrate having formed therein a plurality of second deflection electrodes, where one of the first substrate and the second substrate has formed thereupon a plurality of deformable mirror structures each supported on only one end thereof; and
assembling the first substrate to and spaced from the second substrate such that:
each of the plurality of first deflection electrodes is singly registered with and separated from each of the plurality of second deflection electrodes; and
each of a plurality of deformable mirrors within the plurality of deformable mirror structures is interposed between, physically constrained between, registered with and separated from a singly registered pair of a ~~both~~ the first deflection electrode and ~~the~~ a second deflection electrode.
12. (original) The method of claim 11 wherein the deformable mirror structure is formed upon the first substrate.

13. (original) The method of claim 11 wherein the deformable mirror structure is formed upon the transparent second substrate.

14. (original) The method of claim 11 wherein the second deflection electrode is a transparent electrode.

15. (currently amended) A method for operating a deformable mirror device comprising:

providing a deformable mirror device comprising:

a first substrate having formed therein a plurality of first deflection electrodes;

a second transparent substrate having formed therein a plurality of second deflection electrodes, the first substrate being assembled to and separated from the second substrate such that each of the plurality of first deflection electrodes is registered with and separated from each of the second deflection electrodes to form singly mated pairs of first deflection electrodes and second deflection electrodes; and

a plurality of deformable mirror structures formed upon one of the first substrate and the second substrate, each deformable mirror within a plurality of deformable mirrors within the plurality of deformable mirror structures being interposed between, physically constrained between, registered with and separated from both of a mated pair of a the first deflection electrode and a the second deflection electrode, each deformable mirror being supported on only one end thereof; and

imposing upon the first deflection electrode, the second deflection electrode and the deformable mirror a series of voltages of polarity and magnitude such as to deform the deformable mirror towards the first deflection electrode or the second deflection electrode.

16. (original) The method of claim 15 wherein the deformable mirror structure is formed upon the first substrate.

67,200-937; TSMC 02-0293
Serial Number 10/761,655

17. (original) The method of claim 15 wherein the deformable mirror structure is formed upon the transparent second substrate.

18. (original) The method of claim 15 wherein the second electrode is a transparent electrode.

19. (original) The method of claim 15 wherein the deformable mirror is deformed towards the first electrode.

20. (original) The method of claim 15 wherein the deformable mirror is deformed towards the second electrode.

21. (new) The cell structure of claim 4 wherein each of the first deflection electrode and the second deflection electrode serves as a stop with respect to the deflectable element.

22. (new) The method of claim 11 wherein each of the first deflection electrode and the second deflection electrode serves as a stop with respect to a deformable mirror.

23. (new) The method of claim 15 wherein each of the first deflection electrode and the second deflection electrode serves as a stop with respect to the deformable mirror.